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Clear-cut, Easy and Safe Air Purifying Technique (Poyrazmatic)

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ABSTRACT

Indoor air quality is inevitably linked to ambient air quality. What controls ambient air quality also affects indoor air quality. The desert belts and their respective dust plumes on a global basis regulate ambient air quality. Each desert has its own exclusive extension zone and during the period of cyclonic depressions millions of tons of dust is injected into the atmosphere. These dust particles having 10- micron size or less can traverse long distances and are composed of clay minerals and embedded bacteria fungus and viruses. It has been shown that when inhaled it may adversely affect the respiratory system as well as triggering genes that are responsible from the production of specific proteins that results with migraine attacks. Basing on this work we have developed simple water based air purifier system that can effectively removes 90 % of particles in an hour and ultimate purification is reached within 120 minutes in one cubic meter experimental chamber. Of course, increase in air flux will inevitably shorten the time necessary for ultimate purification for a given environment. The air purifying system consists of an aquarium pump hose and air stone and simple 5 l water bottle. The basic principle behind the purification system based on the fact that during the rise of air bubble the air bubbles increases the surface area that is in contact with water and friction with water creates a vortex further assisting the transfer of any particles and bacteria fungus and virus to water phase. With this simple purification system the adverse effect of dust particles can effectively be removed from indoor environment. Renewing the water is the only thing required for the continuation of effective purification. The water is not wasted and can be used to irrigate the flowers lawns etc. Such systems also offer an ideal low cost pre-cleaning filtering that can be used to extent the operational life of expensive filtering systems.

Keywords:

Air quality, Bacteria, Dust, Water filtration.